



<110> DeGroot, Anne

<120> Human T Cell Response to MHC-Binding Motif Clusters

<130> 17999-004 US

<140> 09/813,333

<141> 2001-03-20

<150> 60/190,834

<151> 2000-03-20

<160> 81

<170> PatentIn Ver. 2.1

<210> 1

<211> 18

<212> PRT

<213> Mycobacterium tuberculosis

<400> 1

Met Leu Gly Asn Ala Pro Ser Val Val Pro Asn Thr Thr Leu Gly Met
1 5 10 15

His Cys

<210> 2

<211> 20

<212> PRT

<213> Mycobacterium tuberculosis

<400> 2

Gly Ser Phe Gly Ser Ala Pro Ser Asn Gly Trp Leu Lys Leu Gly Leu
1 5 10 15

Val Glu Phe Gly
20

<210> 3

<211> 20

<212> PRT

<213> Mycobacterium tuberculosis

<400> 3

Leu Lys Leu Gly Leu Val Glu Phe Gly Gly Val Ala Lys Leu Asn Ala
1 5 10 15

Glu Val Met Ser
20

<210> 4

<211> 13
<212> PRT
<213> Mycobacterium tuberculosis

<400> 4
Gln Ala Val Met Leu Gly Thr Gly Thr Pro Asn Arg Ala
1 5 10

<210> 5
<211> 20
<212> PRT
<213> Mycobacterium tuberculosis

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Cys Glu Val Trp Ser Asn Val Ser Glu Thr Ile Ser Gly Pro Arg Leu
1 5 10 15

Tyr Gly Glu Met
20

<210> 6
<211> 20
<212> PRT
<213> Mycobacterium tuberculosis

<400> 6
Val Ser Glu Thr Ile Ser Gly Pro Arg Leu Tyr Gly Glu Met Thr Met
1 5 10 15

Gln Gly Thr Arg
20

<210> 7
<211> 20
<212> PRT
<213> Mycobacterium tuberculosis

<400> 7
Arg Ser Leu Phe Pro Glu Phe Ser Glu Leu Phe Ala Ala Phe Pro Ser
1 5 10 15

Phe Ala Gly Leu
20

<210> 8
<211> 20
<212> PRT
<213> Mycobacterium tuberculosis

<400> 8
Phe Ser Glu Leu Phe Ala Ala Phe Pro Ser Phe Ala Gly Leu Arg Pro
1 5 10 15

Thr Phe Asp Thr

<210> 9
<211> 13
<212> PRT
<213> *Mycobacterium tuberculosis*

<400> 9
Ala Glu Leu Pro Gly Val Asp Pro Asp Lys Asp Val Asp
1 5 10

<210> 10
<211> 11
<212> PRT
<213> *Mycobacterium tuberculosis*

<400> 10
Leu Thr Ile Lys Ala Glu Arg Thr Glu Gln Lys
1 5 10

<210> 11
<211> 16
<212> PRT
<213> *Mycobacterium tuberculosis*

<400> 11
Phe Ala Tyr Gly Ser Phe Val Arg Thr Val Ser Leu Pro Val Gly Ala
1 5 10 15

<210> 12
<211> 17
<212> PRT
<213> *Mycobacterium tuberculosis*

<400> 12
Gly Ile Leu Thr Val Ser Val Ala Val Ser Glu Gly Lys Pro Thr Glu
1 5 10 15

Lys

<210> 13
<211> 19
<212> PRT
<213> *Mycobacterium tuberculosis*

<400> 13
Val Ala Val Ala Gly Ala Ala Ile Leu Val Ala Gly Leu Ser Gly Cys
1 5 10 15

Ser Ser Asn

<210> 14
<211> 17
<212> PRT
<213> *Mycobacterium tuberculosis*

<400> 14
Gln Asn Val Thr Gly Ser Val Val Cys Thr Thr Ala Ala Gly Asn Val
1 5 10 15

Asn

<210> 15
<211> 20
<212> PRT
<213> *Mycobacterium tuberculosis*

<400> 15
Ile Ala Ile Gly Gly Ala Ala Thr Gly Ile Ala Ala Val Leu Thr Asp
1 5 10 15

Gly Asn Pro Pro
20

<210> 16
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<213> *Mycobacterium tuberculosis*

<400> 16
Val Thr Leu Gly Tyr Thr Ser Gly Thr Gly Gln
1 5 10

<210> 17
<211> 13
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<213> *Mycobacterium tuberculosis*

<400> 17
Ser His Tyr Lys Ile Thr Gly Thr Ala Thr Gly Val Asp
1 5 10

<210> 18
<211> 15
<212> PRT
<213> *Mycobacterium tuberculosis*

<400> 18
Leu Pro Val Glu Tyr Leu Gln Val Pro Ser Pro Ser Met Gly Arg
1 5 10 15

<210> 19

<211> 13
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<213> Mycobacterium tuberculosis

<400> 19
Ala Leu Tyr Leu Leu Asp Gly Leu Arg Ala Gln Asp Asp
1 5 10

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<400> 20
Ser Val Val Met Pro Val Gly Gly Gln Ser Ser Phe Tyr Ser Asp Trp
1 5 10 15

<210> 21
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<213> Mycobacterium tuberculosis

<400> 21
Thr Phe Leu Thr Ser Glu Leu Pro Gly Trp Leu Gln
1 5 10

<210> 22
<211> 20
<212> PRT
<213> Mycobacterium tuberculosis

<400> 22
Arg His Val Lys Pro Thr Gly Ser Ala Val Val Gly Leu Ser Met Ala
1 5 10 15

Ala Ser Ser Ala
20

<210> 23
<211> 20
<212> PRT
<213> Mycobacterium tuberculosis

<400> 23
Val Gly Leu Ser Met Ala Ala Ser Ser Ala Leu Thr Leu Ala Ile Tyr
1 5 10 15

His Pro Gln Gln
20

<210> 24
<211> 20
<212> PRT

<213> *Mycobacterium tuberculosis*

<400> 24

Leu Ala Ile Tyr His Pro Gln Gln Phe Val Tyr Ala Gly Ala Met Ser
1 5 10 15

Gly Leu Leu Asp

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<210> 25

<211> 18

<212> PRT

<213> *Mycobacterium tuberculosis*

<400> 25

Pro Leu Leu Asn Val Gly Lys Leu Ile Ala Asn Asn Thr Arg Val Trp
1 5 10 15

Val Tyr

<210> 26

<211> 16

<212> PRT

<213> *Mycobacterium tuberculosis*

<400> 26

Lys Phe Leu Glu Gly Phe Val Arg Thr Ser Asn Ile Lys Phe Gln Asp
1 5 10 15

<210> 27

<211> 13

<212> PRT

<213> *Mycobacterium tuberculosis*

<400> 27

Gly Val Phe Asp Phe Pro Asp Ser Gly Thr His Ser Trp
1 5 10

<210> 28

<211> 12

<212> PRT

<213> *Mycobacterium tuberculosis*

<400> 28

Glu Tyr Trp Gly Ala Gln Leu Asn Ala Met Lys Pro
1 5 10

<210> 29

<211> 13

<212> PRT

<213> *Mycobacterium tuberculosis*

<400> 29
Pro Ser Met Gly Arg Asp Ile Lys Val Gln Phe Gln Ser
1 5 10

<210> 30
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<212> PRT
<213> *Mycobacterium tuberculosis*

<400> 30
Ser Gly Leu Ser Val Val Met Pro Val Gly Gly Gln Ser
1 5 10

<210> 31
<211> 18
<212> PRT
<213> *Mycobacterium tuberculosis*

<400> 31
Val Val Gly Leu Ser Met Ala Ala Ser Ser Ala Leu Thr Leu Ala Ile
1 5 10 15

Tyr His

<210> 32
<211> 20
<212> PRT
<213> *Mycobacterium tuberculosis*

<400> 32
Ala Ile Tyr His Pro Gln Gln Phe Val Tyr Ala Gly Ala Met Ser Gly
1 5 10 15

Leu Leu Asp Pro
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<210> 33
<211> 13
<212> PRT
<213> *Mycobacterium tuberculosis*

<400> 33
Lys Leu Ile Ala Asn Asn Thr Arg Val Trp Val Tyr Cys
1 5 10

<210> 34
<211> 13
<212> PRT
<213> *Mycobacterium tuberculosis*

<400> 34
Pro Thr Gly Ser Ala Val Val Gly Leu Ser Met Ala Ala

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5

10

<210> 35
<211> 17
<212> PRT
<213> *Mycobacterium tuberculosis*

<400> 35
Gln Phe Val Tyr Ala Gly Ala Met Ser Gly Leu Leu Asp Pro Ser Gln
1 5 10 15

Ala

<210> 36
<211> 19
<212> PRT
<213> *Mycobacterium tuberculosis*

<400> 36
Pro Leu Leu Asn Val Gly Lys Leu Ile Ala Asn Asn Thr Arg Val Trp
1 5 10 15

Val Tyr Cys

<210> 37
<211> 21
<212> PRT
<213> *Mycobacterium tuberculosis*

<400> 37
Lys Ile Arg Leu His Thr Leu Leu Ala Val Leu Thr Ala Ala Pro Leu
1 5 10 15

Leu Leu Ala Ala Ala
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<210> 38
<211> 21
<212> PRT
<213> *Mycobacterium tuberculosis*

<400> 38
Asp Met Ala Ala His Lys Gly Leu Met Asn Ile Ala Leu Ala Ile Ser
1 5 10 15

Ala Gln Gln Val Asn
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<210> 39
<211> 19
<212> PRT

<213> *Mycobacterium tuberculosis*

<400> 39

Pro Gly Val Ser Glu His Leu Lys Leu Asn Gly Lys Trp Leu Ala Ala
1 5 10 15

Met Tyr Gln

<210> 40

<211> 13

<212> PRT

<213> *Mycobacterium tuberculosis*

<400> 40

Ala Ala Leu Asn Pro Gly Val Asn Leu Pro Gly Thr Ala
1 5 10

<210> 41

<211> 13

<212> PRT

<213> *Mycobacterium tuberculosis*

<400> 41

Pro Gly Phe Gly Thr Thr Val Asp Pro Pro Ala Val Pro
1 5 10

<210> 42

<211> 12

<212> PRT

<213> *Mycobacterium tuberculosis*

<400> 42

Leu Leu Pro Asp Ala Gln Ser Ile Gln Ala Ala Ala
1 5 10

<210> 43

<211> 19

<212> PRT

<213> *Mycobacterium tuberculosis*

<400> 43

Pro Ala Pro Asp Gly Tyr Pro Ile Ile Asn Tyr Glu Tyr Ala Ile Val
1 5 10 15

Asn Asn Arg

<210> 44

<211> 20

<212> PRT

<213> *Mycobacterium tuberculosis*

<400> 44

Ala Ile Thr Asp Gly Asn Lys Ala Ser Phe Leu Asp Gln Val His Phe
1 5 10 15

Gln Pro Leu Pro
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<210> 45

<211> 13

<212> PRT

<213> *Mycobacterium tuberculosis*

<400> 45

Ala Ser Phe Leu Asp Gln Val His Phe Gln Pro Leu Pro
1 5 10

<210> 46

<211> 20

<212> PRT

<213> *Mycobacterium tuberculosis*

<400> 46

Ile Arg Leu His Thr Leu Leu Ala Val Leu Thr Ala Ala Pro Leu Leu
1 5 10 15

Leu Ala Ala Ala
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<210> 47

<211> 20

<212> PRT

<213> *Mycobacterium tuberculosis*

<400> 47

Asn Phe Leu Leu Pro Asp Ala Gln Ser Ile Gln Ala Ala Ala Ala Gly
1 5 10 15

Phe Ala Ser Lys
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<210> 48

<211> 20

<212> PRT

<213> *Mycobacterium tuberculosis*

<400> 48

Tyr Ala Ile Val Asn Asn Arg Gln Lys Asp Ala Ala Thr Ala Gln Thr
1 5 10 15

Leu Gln Ala Phe
20

<210> 49

<211> 17
<212> PRT
<213> Mycobacterium tuberculosis

<400> 49
Thr Gly Ser Gly Ala Gly Ile Ala Gln Ala Ala Ala Gly Thr Val Asn
1 5 10 15

Ile

<210> 50
<211> 20
<212> PRT
<213> Mycobacterium tuberculosis

<400> 50
Met Ala Ala His Lys Gly Leu Met Asn Ile Ala Leu Ala Ile Ser Ala
1 5 10 15

Gln Gln Val Asn
20

<210> 51
<211> 20
<212> PRT
<213> Mycobacterium tuberculosis

<400> 51
Leu Asn Pro Gly Val Asn Leu Pro Gly Thr Ala Val Val Pro Leu His
1 5 10 15

Arg Ser Asp Gly
20

<210> 52
<211> 20
<212> PRT
<213> Mycobacterium tuberculosis

<400> 52
Ala Glu Thr Pro Gly Cys Val Ala Tyr Ile Gly Ile Ser Phe Leu Asp
1 5 10 15

Gln Ala Ser Gln
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<210> 53
<211> 21
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<213> Mycobacterium tuberculosis

<400> 53
Ile Arg Leu His Thr Leu Leu Ala Val Leu Thr Ala Ala Pro Leu Leu

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5

10

15

Leu Ala Ala Ala Gly
20

<210> 54
<211> 13
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<213> Mycobacterium tuberculosis

<400> 54
Ala Gly Ala Gly Thr Val Ala Thr Thr Pro Ala Ser Ser
1 5 10

<210> 55
<211> 18
<212> PRT
<213> Mycobacterium tuberculosis

<400> 55
Thr Gly Ser Gly Ala Gly Ile Ala Gln Ala Ala Ala Gly Thr Val Asn
1 5 10 15

Ile Gly

<210> 56
<211> 23
<212> PRT
<213> Mycobacterium tuberculosis

<400> 56
Asp Met Ala Ala His Lys Gly Leu Met Asn Ile Ala Leu Ala Ile Ser
1 5 10 15

Ala Gln Gln Val Asn Tyr Asn
20

<210> 57
<211> 14
<212> PRT
<213> Mycobacterium tuberculosis

<400> 57
Pro Gln Ile Ala Ala Leu Asn Pro Gly Val Asn Leu Pro Gly
1 5 10

<210> 58
<211> 23
<212> PRT
<213> Mycobacterium tuberculosis

<400> 58

Phe Leu Leu Pro Asp Ala Gln Ser Ile Gln Ala Ala Ala Ala Gly Phe
1 5 10 15

Ala Ser Lys Thr Pro Ala Asn
20

<210> 59
<211> 13
<212> PRT
<213> Mycobacterium tuberculosis

<400> 59
Asn Phe Ala Gly Ile Glu Ala Ala Ala Ser Ala Ile Gln
1 5 10

<210> 60
<211> 20
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<400> 60
Gln Trp Asn Phe Ala Gly Ile Glu Ala Ala Ala Ser Ala Ile Gln Gly
1 5 10 15

Asn Val Thr Ser
20

<210> 61
<211> 20
<212> PRT
<213> Mycobacterium tuberculosis

<400> 61
Asn Phe Ala Gly Ile Glu Ala Ala Ala Ser Ala Ile Gln Gly Asn Val
1 5 10 15

Thr Ser Ile His
20

<210> 62
<211> 20
<212> PRT
<213> Mycobacterium tuberculosis

<400> 62
Ile Gln Gly Asn Val Thr Ser Ile His Ser Leu Leu Asp Glu Gly Lys
1 5 10 15

Gln Ser Leu Thr
20

<210> 63
<211> 16

<212> PRT

<213> Mycobacterium tuberculosis

<400> 63

Thr Glu Leu Asn Asn Ala Leu Gln Asn Leu Ala Arg Thr Ile Ser Glu
1 5 10 15

<210> 64

<211> 20

<212> PRT

<213> Mycobacterium tuberculosis

<400> 64

Leu Met Ile Gly Thr Ala Ala Ala Val Val Leu Pro Gly Leu Val Gly
1 5 10 15

Leu Ala Gly Gly

20

<210> 65

<211> 20

<212> PRT

<213> Mycobacterium tuberculosis

<400> 65

Glu Tyr Trp Gly Ala Gln Leu Asn Ala Met Lys Gly Asp Leu Gln Ser
1 5 10 15

Ser Leu Gly Ala

20

<210> 66

<211> 16

<212> PRT

<213> Mycobacterium tuberculosis

<400> 66

Trp Tyr Tyr Gln Ser Gly Leu Ser Ile Val Met Pro Val Gly Gly Gln
1 5 10 15

<210> 67

<211> 19

<212> PRT

<213> Mycobacterium tuberculosis

<400> 67

Gln Gln Phe Ile Tyr Ala Gly Ser Leu Ser Ala Leu Leu Asp Pro Ser
1 5 10 15

Gln Gly Met

<210> 68

<211> 20
<212> PRT
<213> Mycobacterium tuberculosis

<400> 68
Val Val Leu Gly Trp Lys Val Ser Asp Leu Lys Ser Ser Thr Ala Val
1 5 10 15

Ile Pro Gly Tyr
20

<210> 69
<211> 20
<212> PRT
<213> Mycobacterium tuberculosis

<400> 69
Val Ser Asp Leu Lys Ser Ser Thr Ala Val Ile Pro Gly Tyr Pro Val
1 5 10 15

Ala Gly Gln Val
20

<210> 70
<211> 20
<212> PRT
<213> Mycobacterium tuberculosis

<400> 70
Ile Arg Gly Ser Val Thr Pro Ala Val Ser Gln Phe Asn Ala Arg Thr
1 5 10 15

Ala Asp Gly Ile
20

<210> 71
<211> 20
<212> PRT
<213> Mycobacterium tuberculosis

<400> 71
Ile Lys Ile Phe Met Leu Val Thr Ala Val Val Leu Leu Cys Cys Ser
1 5 10 15

Gly Val Ala Thr
20

<210> 72
<211> 20
<212> PRT
<213> Mycobacterium tuberculosis

<400> 72
Tyr Asn Ile Asn Ile Ser Leu Pro Ser Tyr Tyr Pro Asp Gln Lys Ser

1

5

10

15

Leu Glu Asn Tyr
20

<210> 73
<211> 21
<212> PRT
<213> *Mycobacterium tuberculosis*

<400> 73
Ala Ile Pro Pro Arg Gly Thr Gln Ala Val Val Leu Lys Val Tyr Gln
1 5 10 15

Asn Ala Ala Gly Gly
20

<210> 74
<211> 20
<212> PRT
<213> *Mycobacterium tuberculosis*

<400> 74
Ala Thr Ser Phe Ala Ala Ala Gly Leu Ala Ala Leu Ala Val Ala Val
1 5 10 15

Ser Pro Pro Ala
20

<210> 75
<211> 20
<212> PRT
<213> *Mycobacterium tuberculosis*

<400> 75
Ser Phe Ala Ala Ala Gly Leu Ala Ala Leu Ala Val Ala Val Ser Pro
1 5 10 15

Pro Ala Ala Ala
20

<210> 76
<211> 13
<212> PRT
<213> *Mycobacterium tuberculosis*

<400> 76
Val Asn Leu Val Asp Thr Leu Asn Ser Gly Gln Tyr Thr
1 5 10

<210> 77
<211> 20
<212> PRT

<213> *Mycobacterium tuberculosis*

<400> 77

Ala Ala Phe Ser Lys Leu Pro Ala Ser Thr Ile Asp Glu Leu Lys Thr
1 5 10 15

Asn Ser Ser Leu
20

<210> 78

<211> 20

<212> PRT

<213> *Mycobacterium tuberculosis*

<400> 78

Ile Asp Glu Leu Lys Thr Asn Ser Ser Leu Leu Thr Ser Ile Leu Thr
1 5 10 15

Tyr His Val Val
20

<210> 79

<211> 20

<212> PRT

<213> *Mycobacterium tuberculosis*

<400> 79

Leu Thr Ser Ile Leu Thr Tyr His Val Val Ala Gly Gln Thr Ser Pro
1 5 10 15

Ala Asn Val Val
20

<210> 80

<211> 19

<212> PRT

<213> *Mycobacterium tuberculosis*

<400> 80

Gly Val Ser Thr Ala Asn Ala Thr Val Tyr Met Ile Asp Ser Val Leu
1 5 10 15

Met Pro Pro

<210> 81

<211> 16

<212> PRT

<213> *Mycobacterium tuberculosis*

<400> 81

Ile Gly Leu Ser Met Ala Gly Ser Ser Ala Met Ile Leu Ala Ala Tyr
1 5 10 15